

T_g (DSC) of cast PU resin based on 4 different polyols with different amounts of glycerin

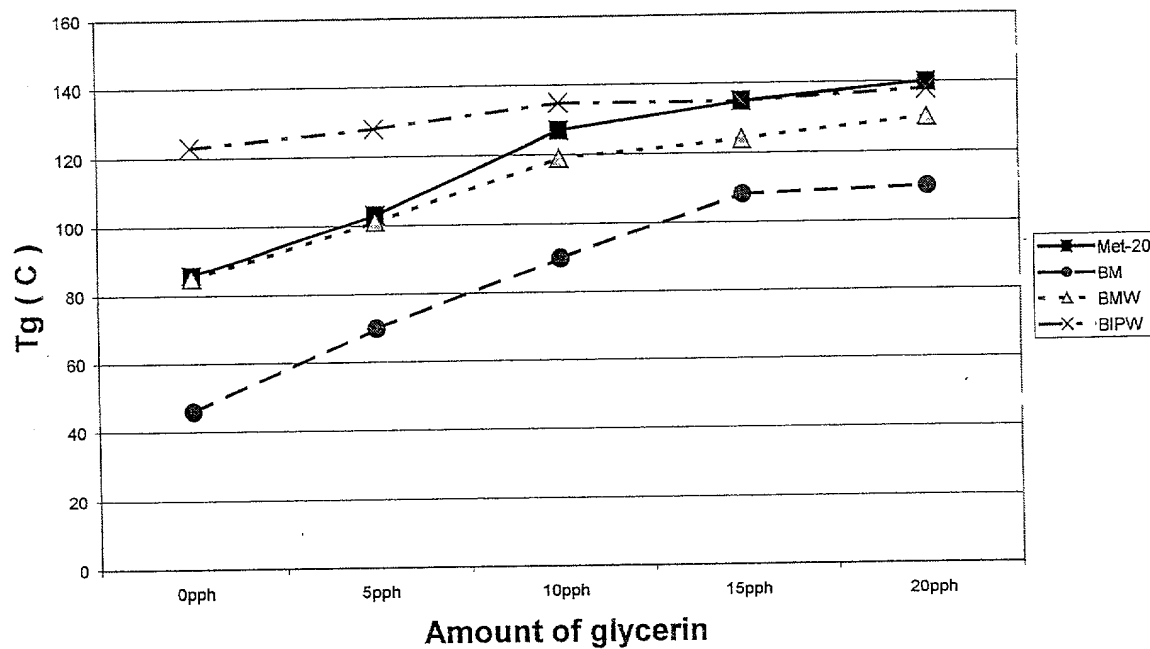


FIG. 1

Flexural modulus of cast PU resin based on 4 different polyols with different amounts of glycerin

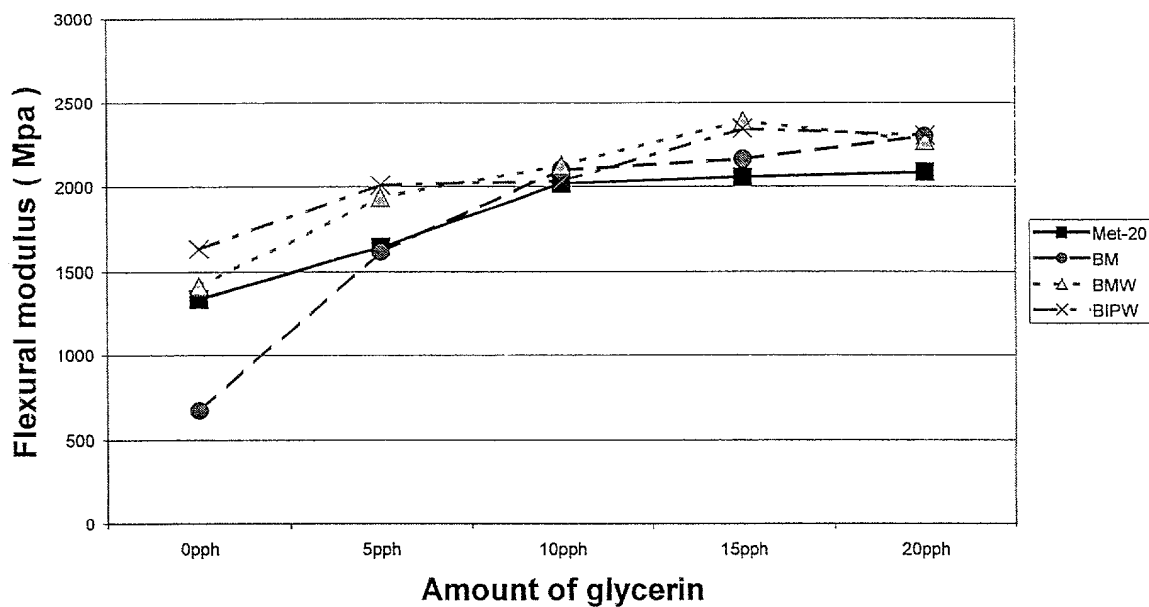


FIG. 2

Tensile strength of cast PU resin based on 4 different polyols with different amounts of glycerin

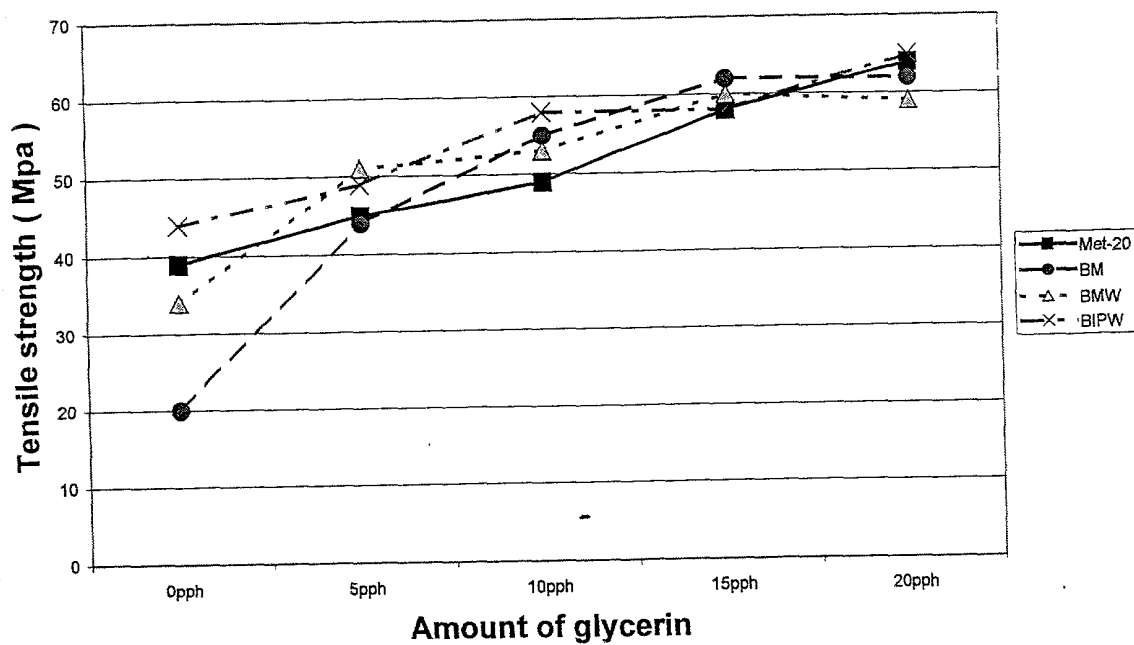


FIG. 3

Compressive strength of cast PU resin based on 3 different polyols with different amount of glycerin

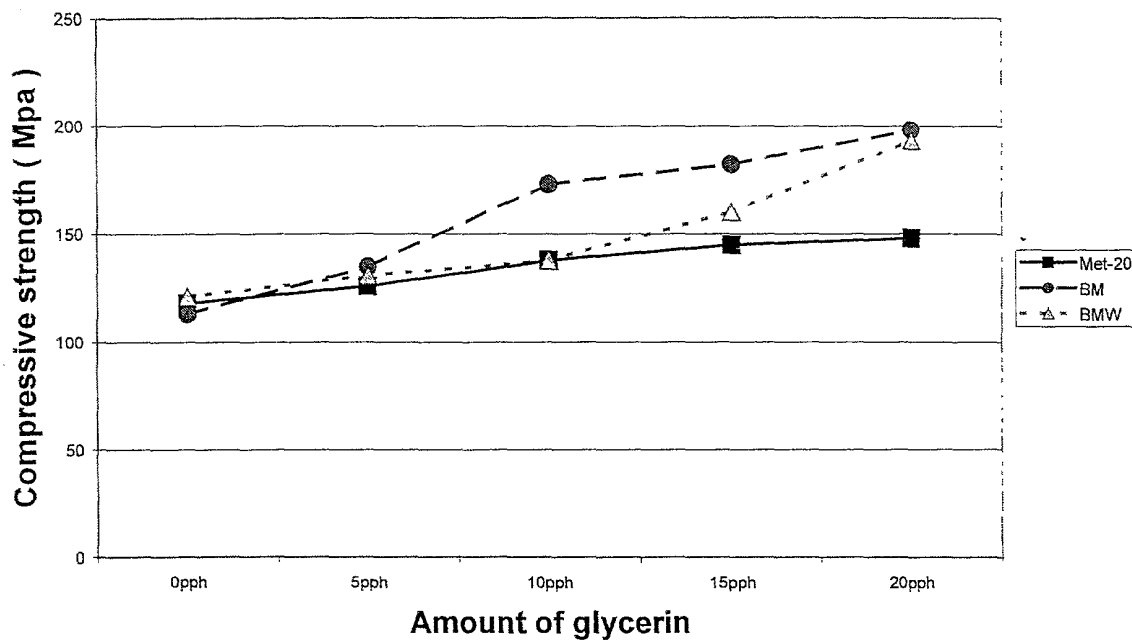


FIG. 4

Hardness of cast PU resin based on 4 different polyols with different amount of glycerin

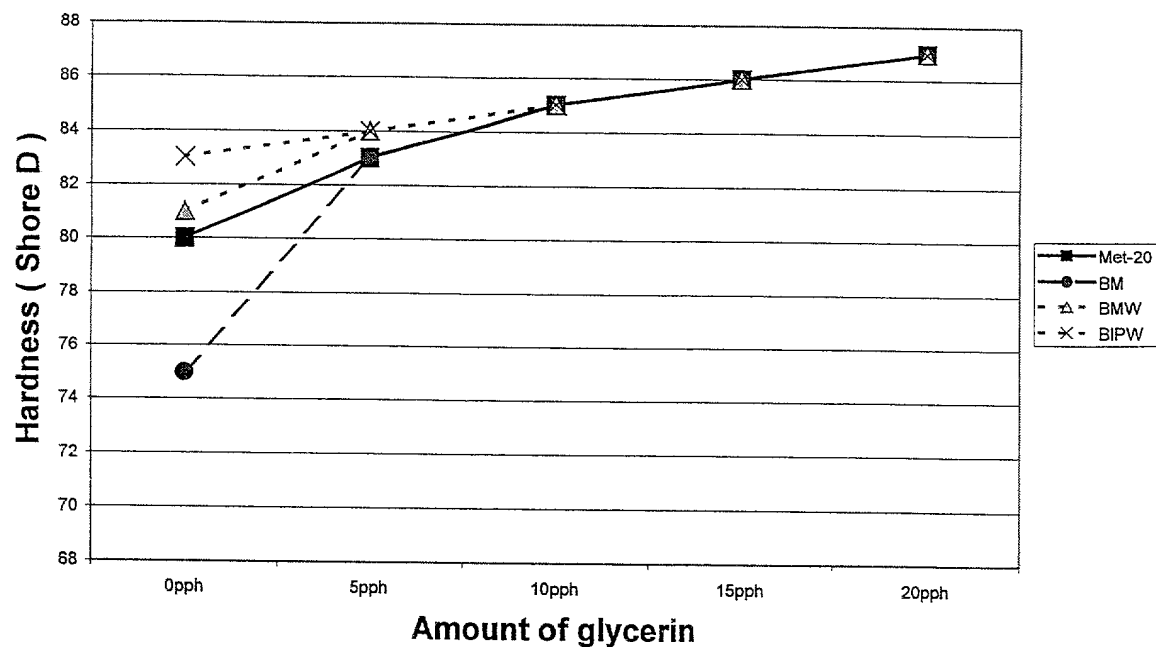


FIG. 5

Effect of temperature on gel time

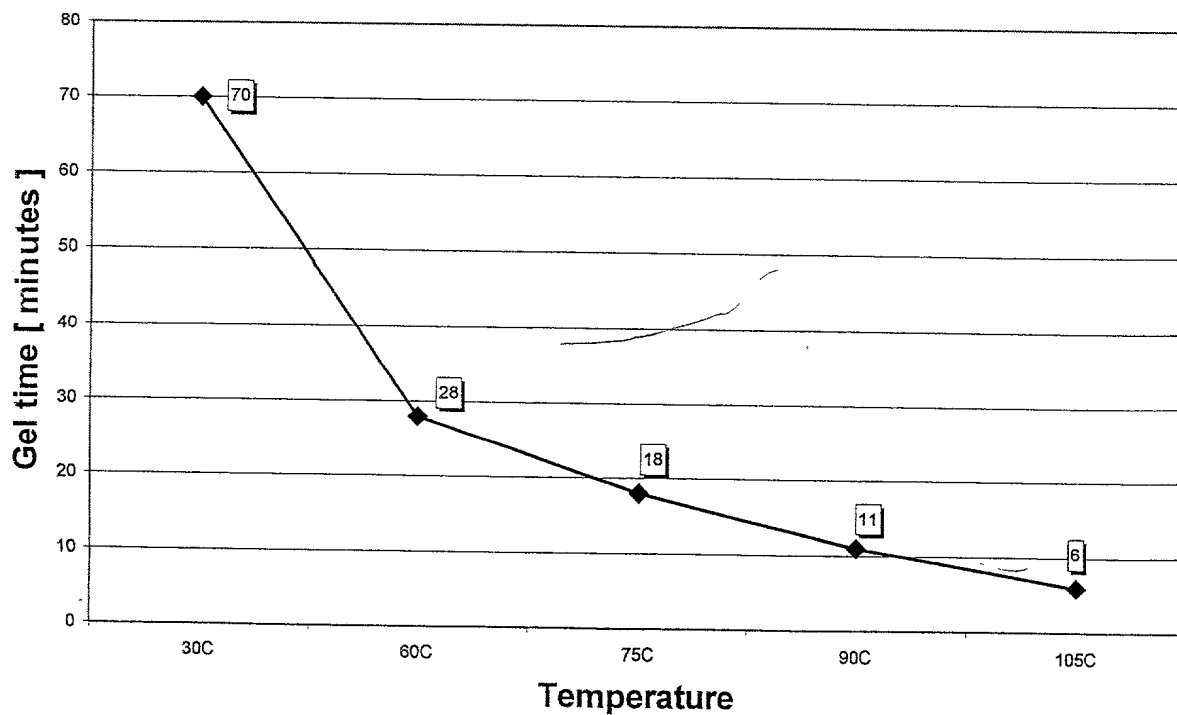
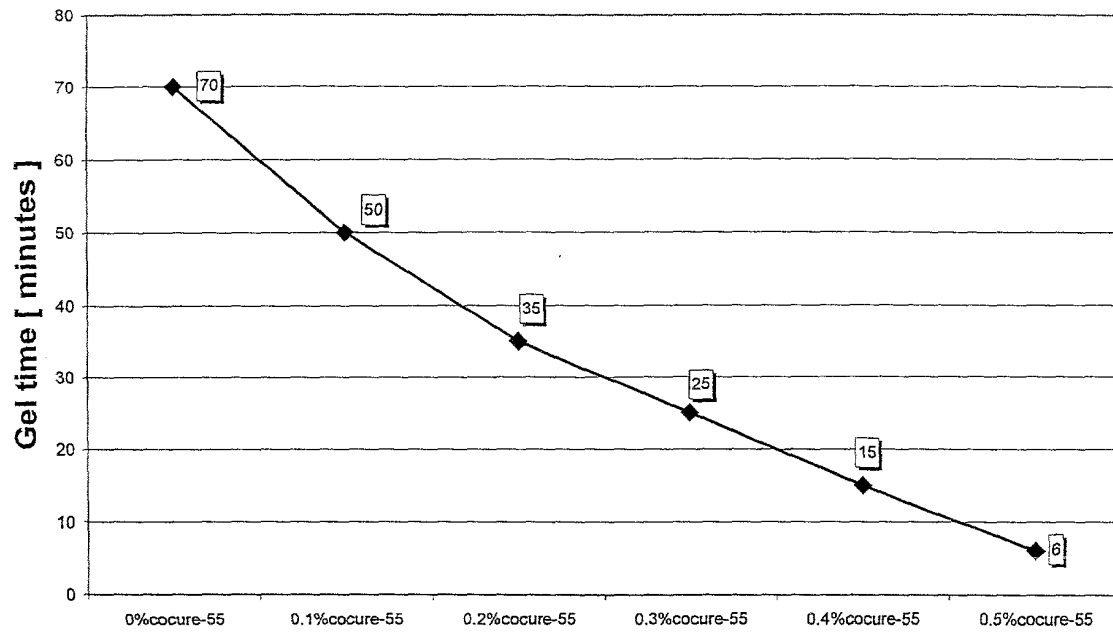


FIG. 6

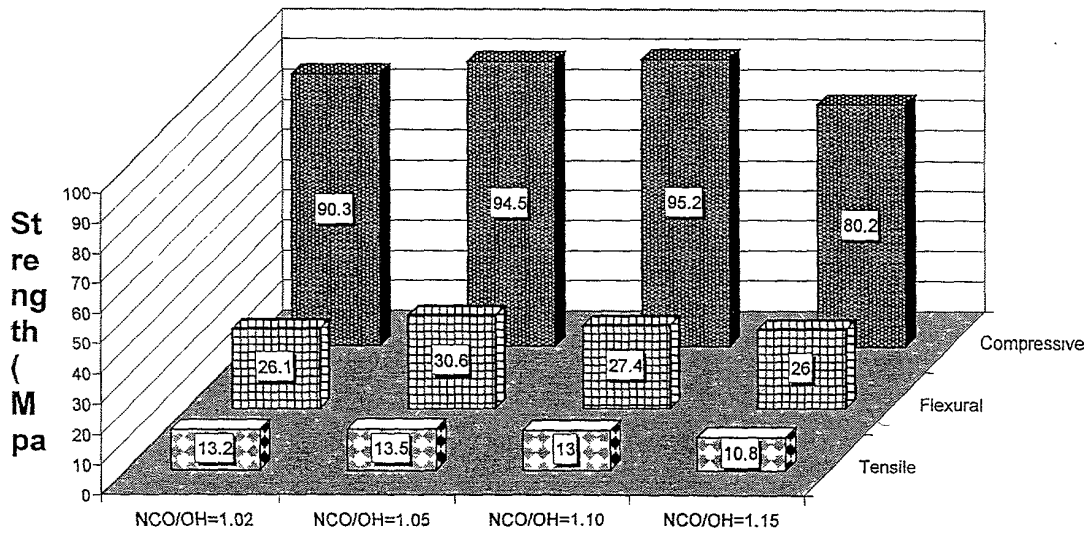
Effect of amount of catalyst on gel time at 30C



Amount of catalyst

FIG. 7

Effect of NCO/OH ratio on mechanical strength of polymer concrete



NCO/OH ratio

FIG. 8

Effect of resin amount on mechanical strength of polymer concrete

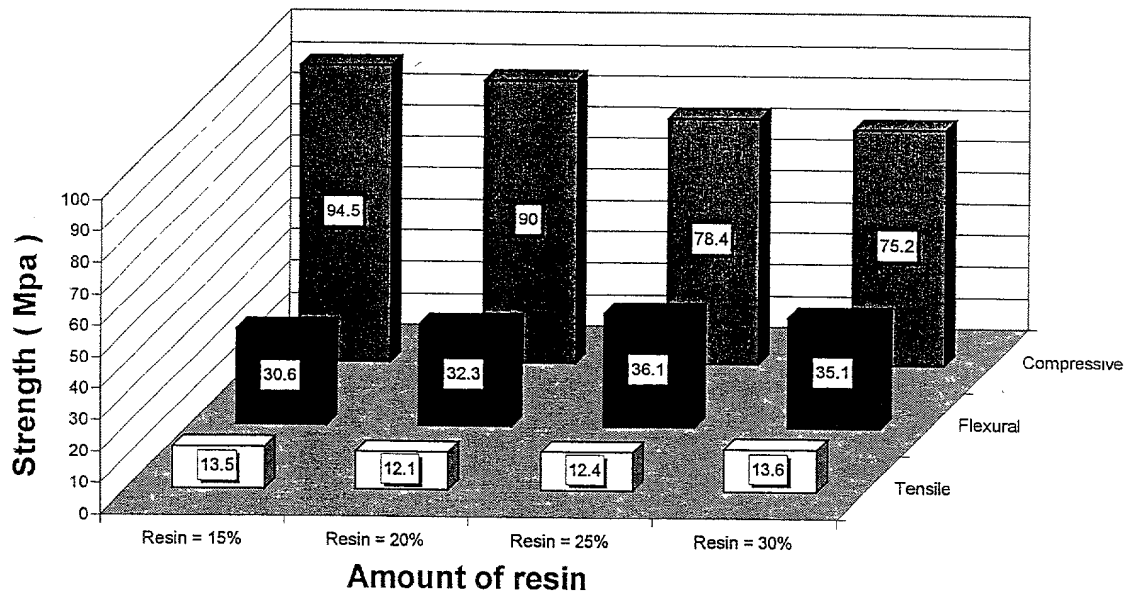


FIG. 9

Effect of amount of fine powder on mechanical strength of polymer concrete

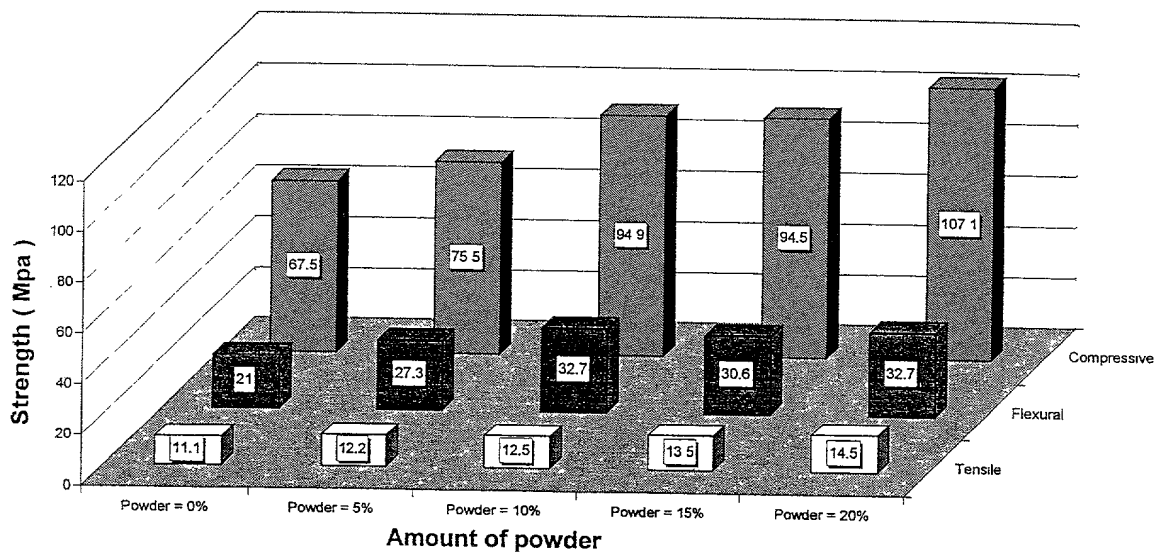


FIG. 10

Effect of amount of pea gravel on mechanical strength of polymer concrete

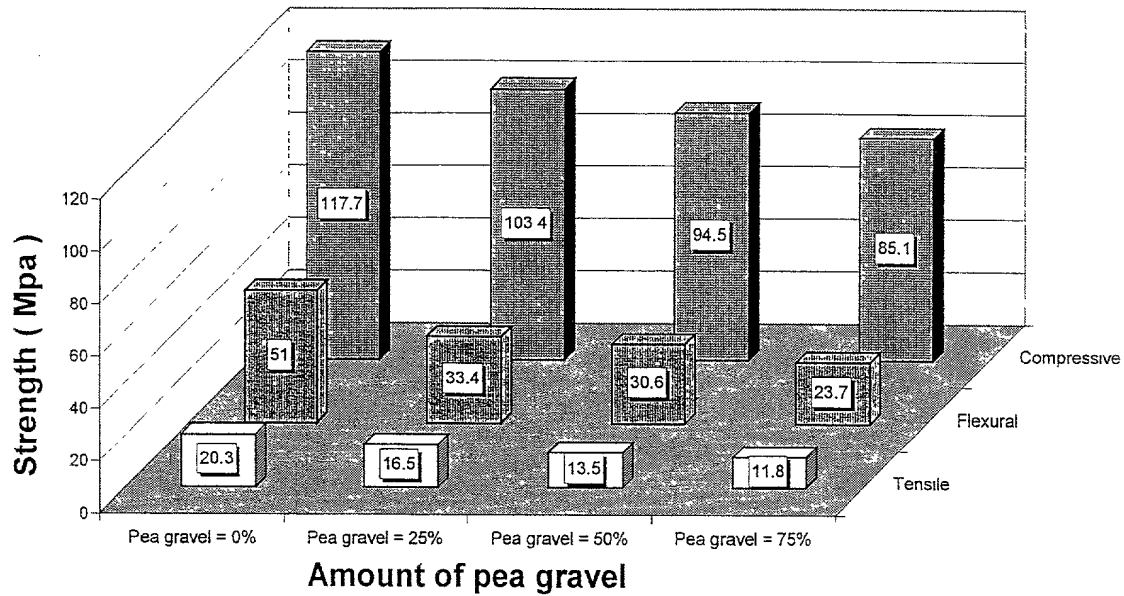


FIG. 11

Effect of sand type on mechanical strength of polymer concrete

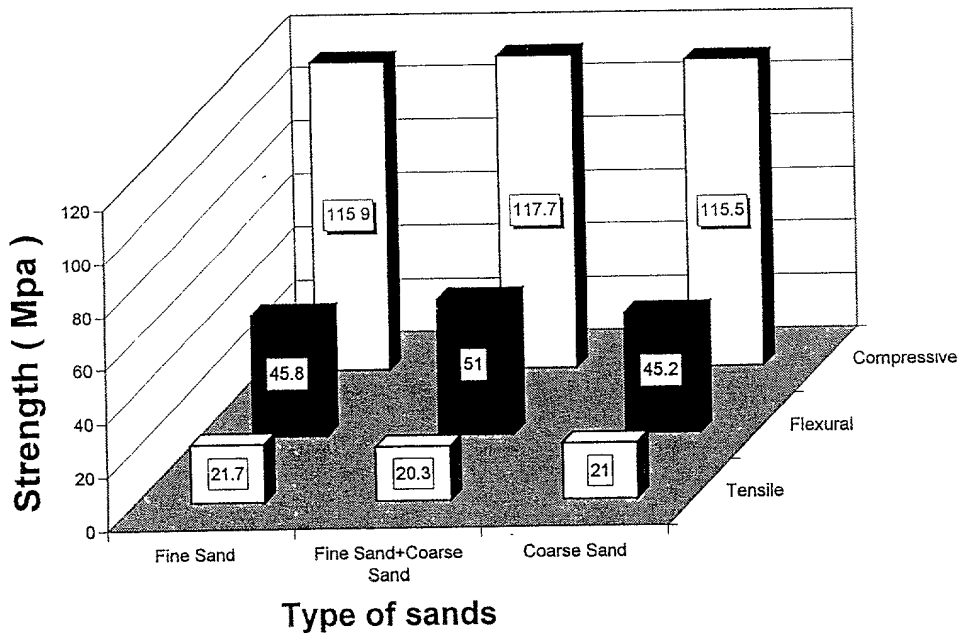


FIG. 12

Effect of amount of glycerin on mechanical strength of polymer concrete (with pea gravel)

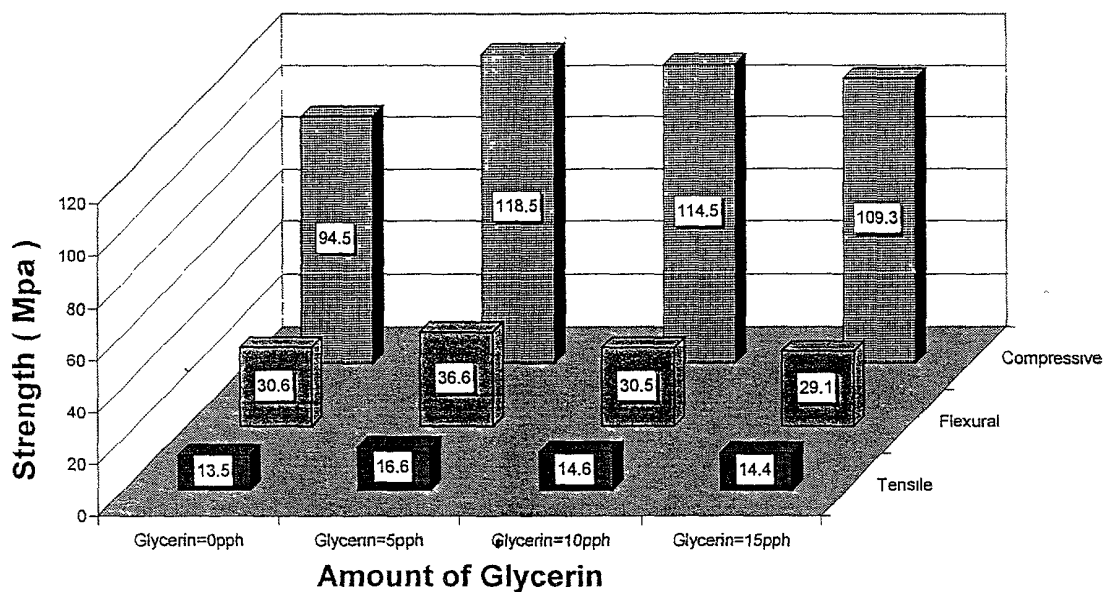


FIG. 13

Effect of amount of glycerin on mechanical strength of polymer concrete (without pea gravel)

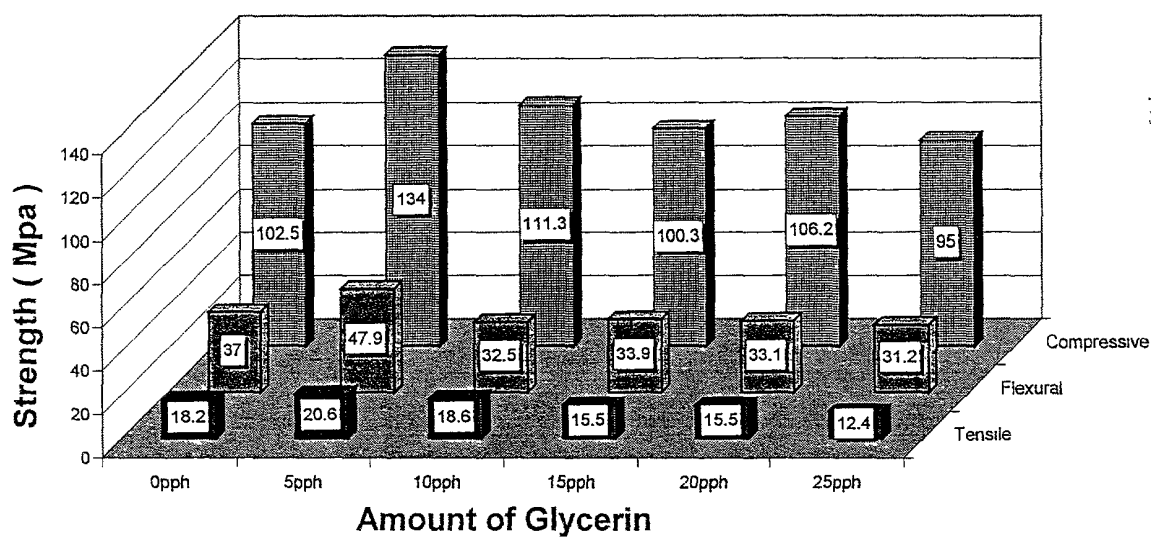
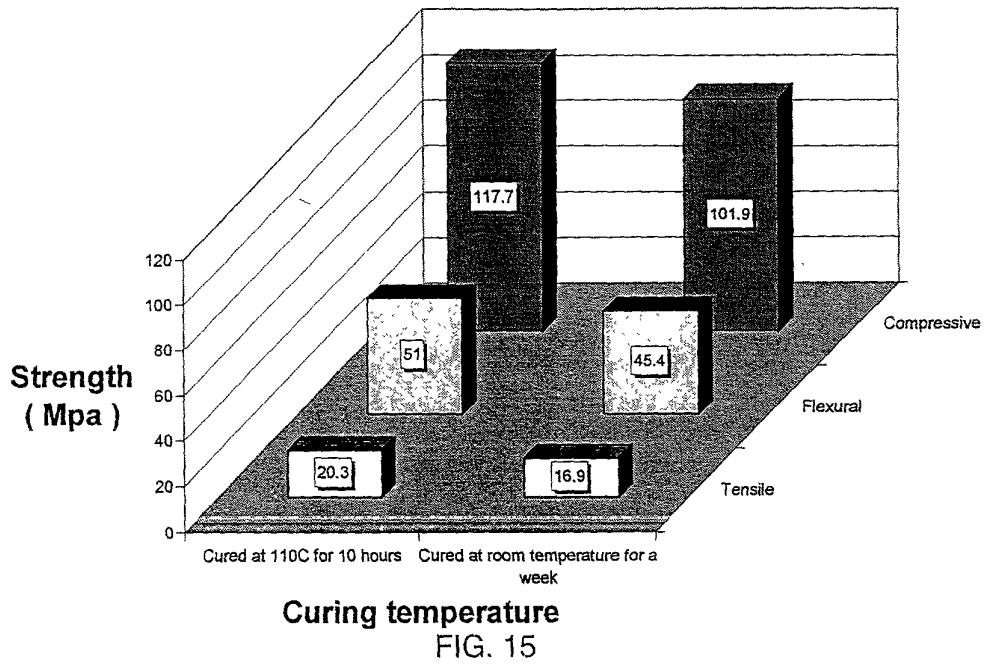
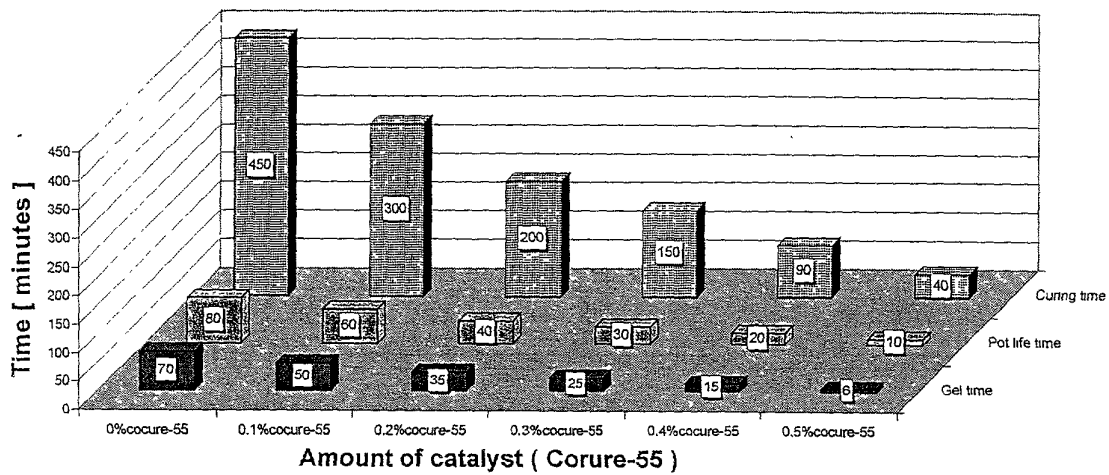


FIG. 14

Effect of curing temperature on mechanical strength of polymer concrete



Effect of amount of catalyst on mechanical strength of polymer concrete (cured for a week)



Effect of amount of catalyst on mechanical strength of polymer concrete (cured for 24 hours)

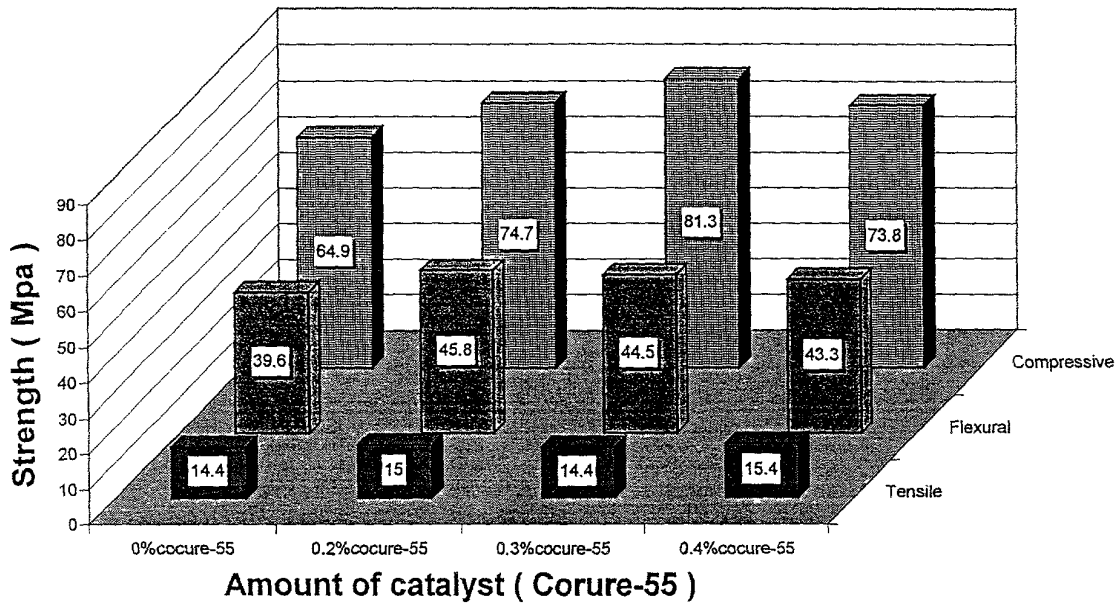


FIG. 17

Effect of amount of catalyst on mechanical strength of polymer concrete (cured for a week)

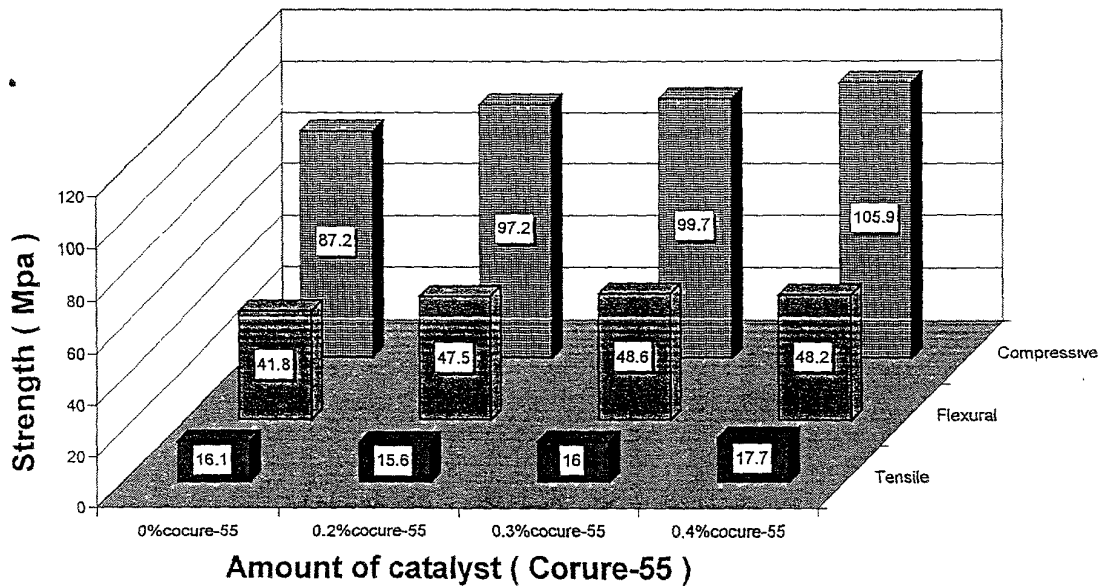


FIG. 18

**Effect of catalyst on mechanical strength of
polymer concrete
(room temperature cured for 2 weeks,)**

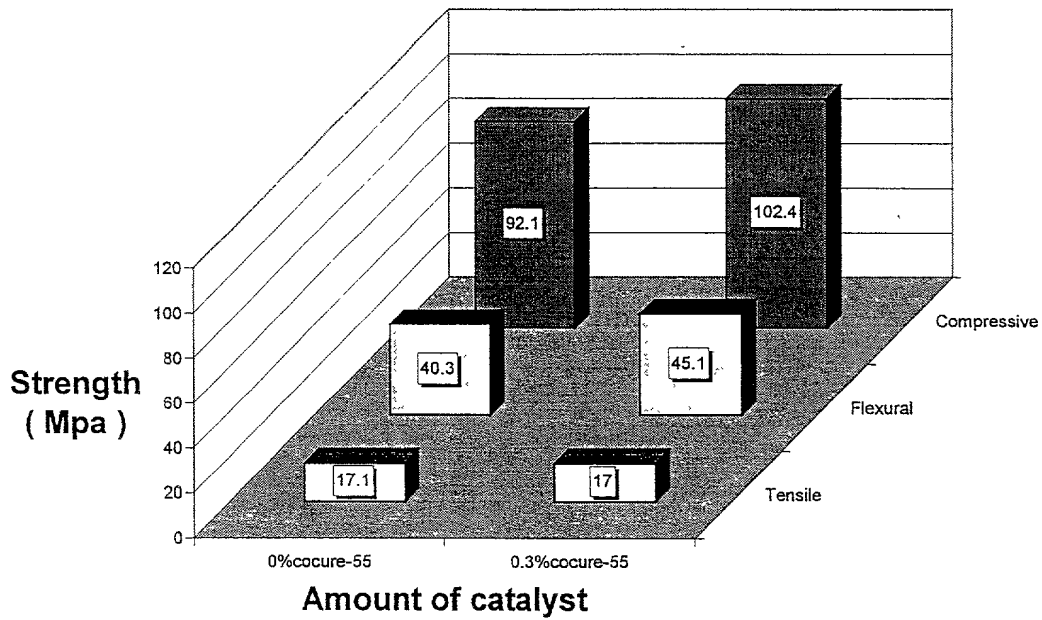


FIG. 19

**Effect of catalyst on mechanical strength of
polymer concrete
(room temperature cured for 1 month)**

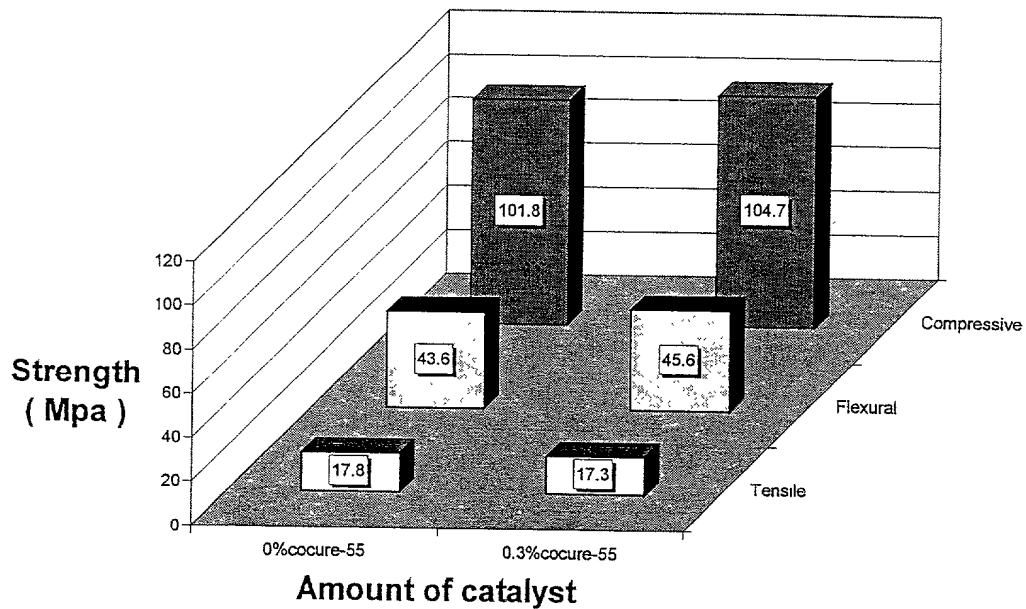


FIG. 20

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**Effect of catalyst on mechanical strength of
polymer concrete
(room temperature cured for 2 month)**

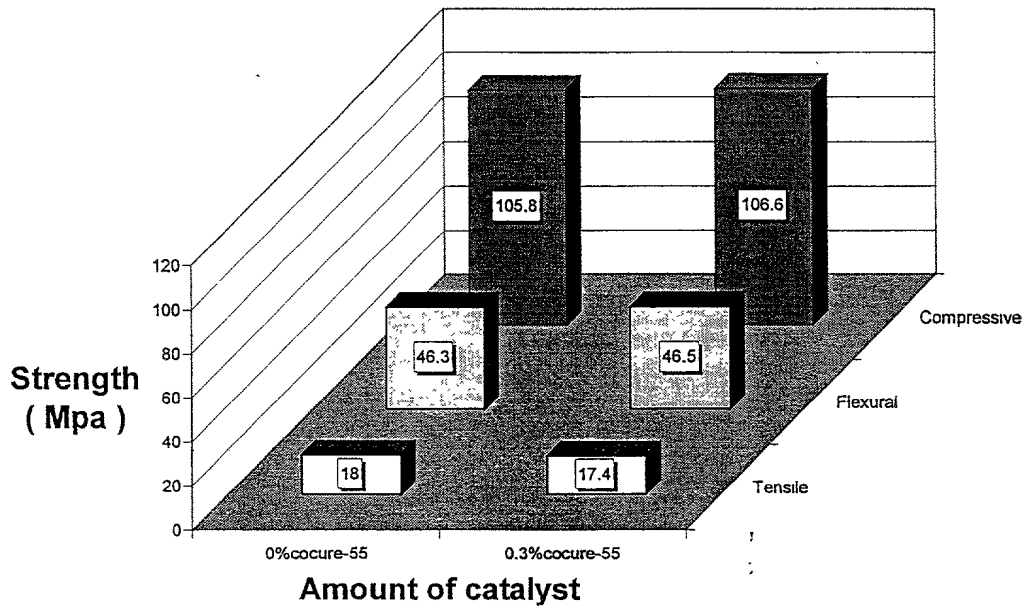


FIG. 21

**Effect of catalyst on mechanical strength of
polymer concrete
(room temperature cured for 3 month)**

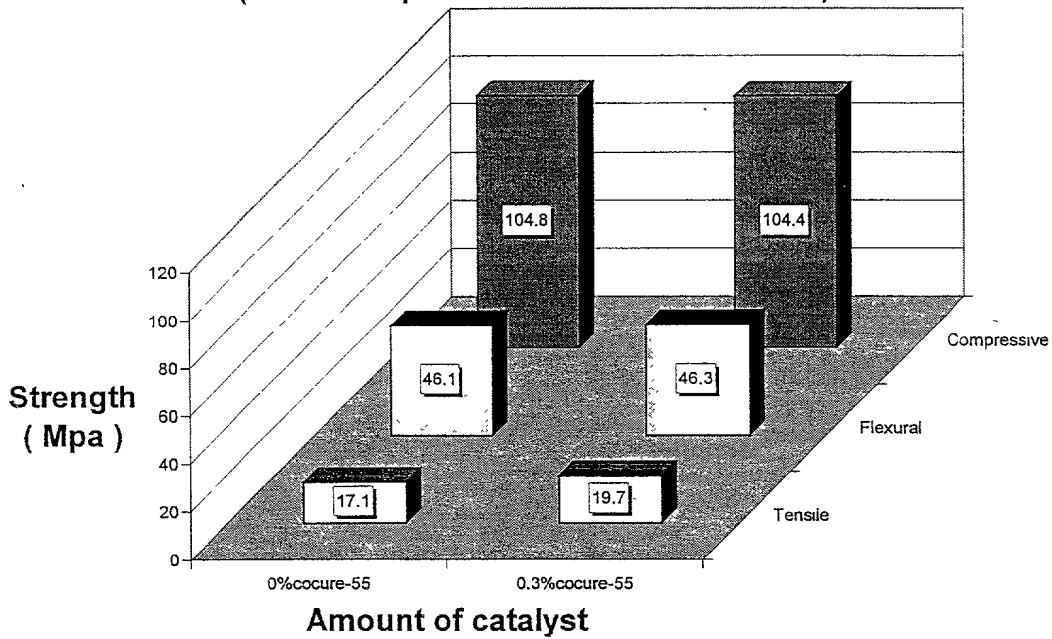


FIG. 22

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Effet of curing time on the mechanical properties
of Soy-based PU concrete samples cured at room temperature
without catalyst

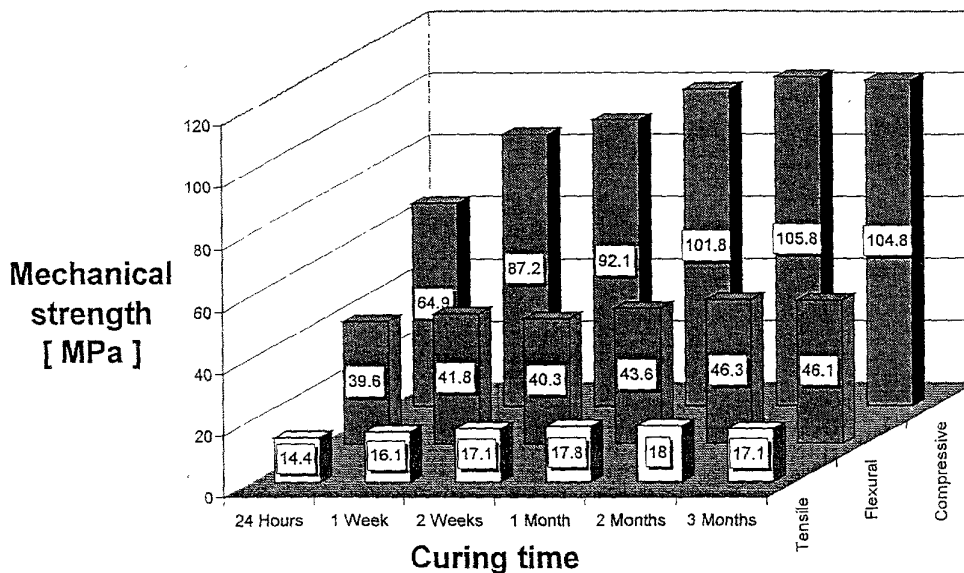


FIG. 23

Effet of curing time on the mechanical properties
of Soy-based PU concrete samples cured at room temperature
with 0.3% cocure 55 as a catalyst

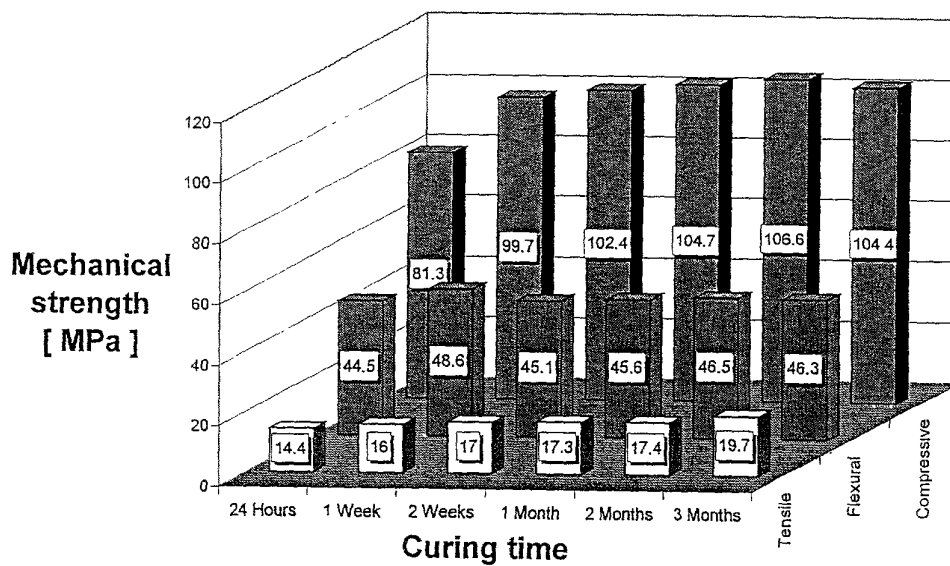


FIG. 24

Tg of polymer concrete samples based on different matrix resins

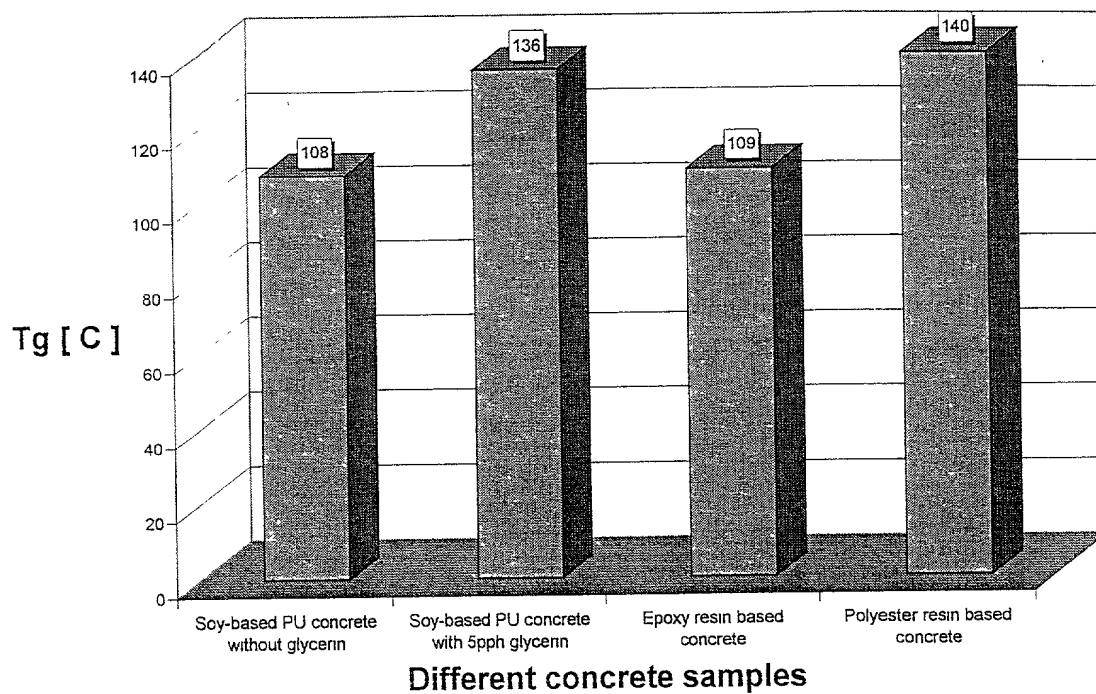


FIG. 25

Splitting tensile strength of polymer concrete samples based on different matrix resins

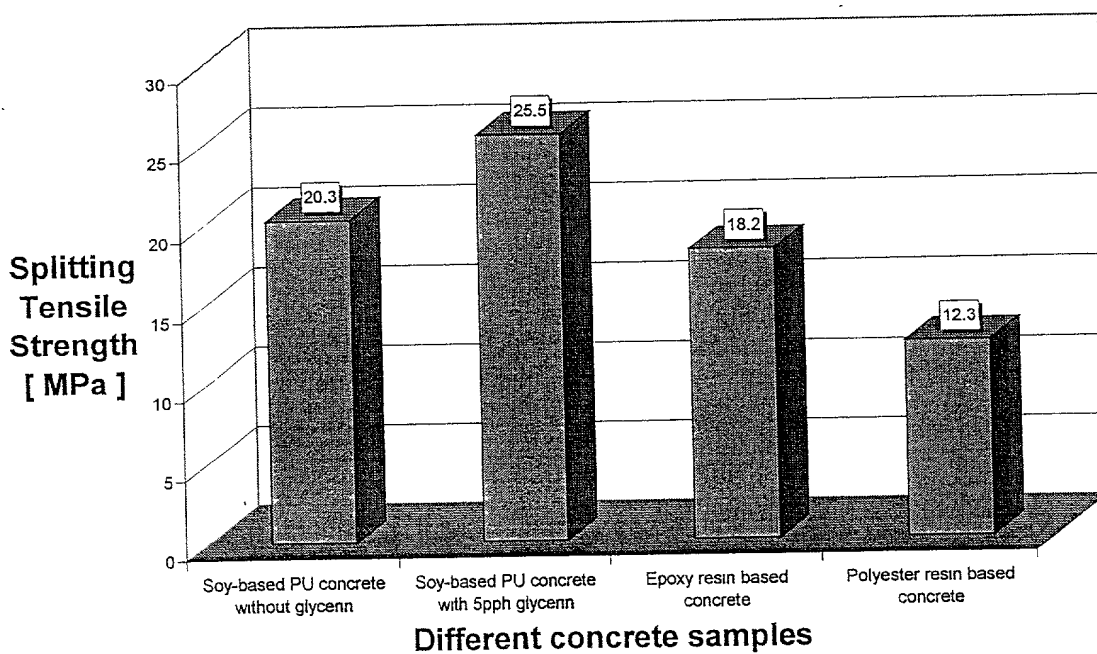
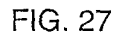


FIG. 26

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	



Concrete Sample	Bending Strength [MPa]
Soy-based PU concrete without glycerin	51
Soy-based PU concrete with 5pph glycerin	56.5
Epoxy resin based concrete	50.8
Polyester resin based concrete	24

FIG. 28

Flexural modulus of polymer concrete samples
based on different matrix resins

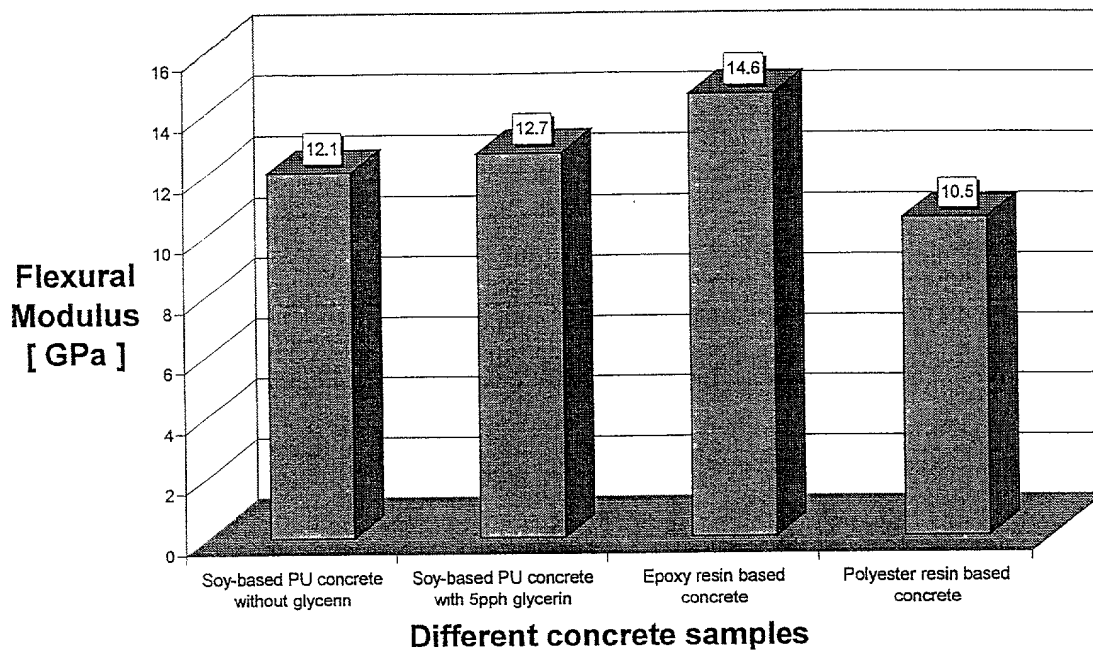


FIG. 29

Abrasion resistance of polymer concrete samples
based on different matrix resins

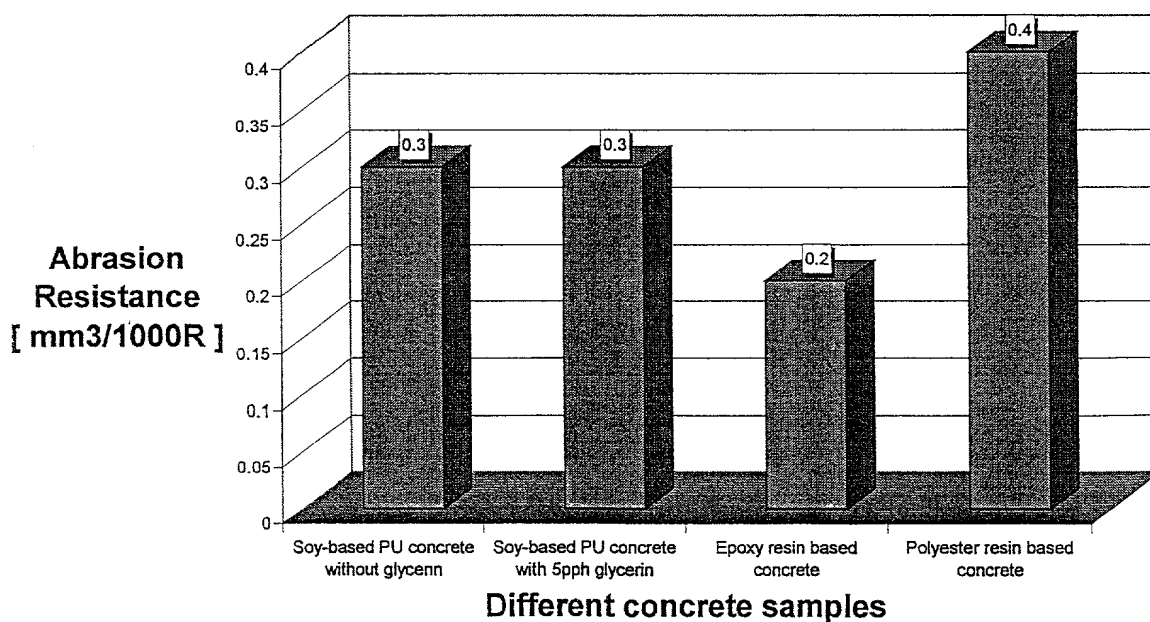


FIG. 30

Effect of water on mechanical strength of polymer concrete

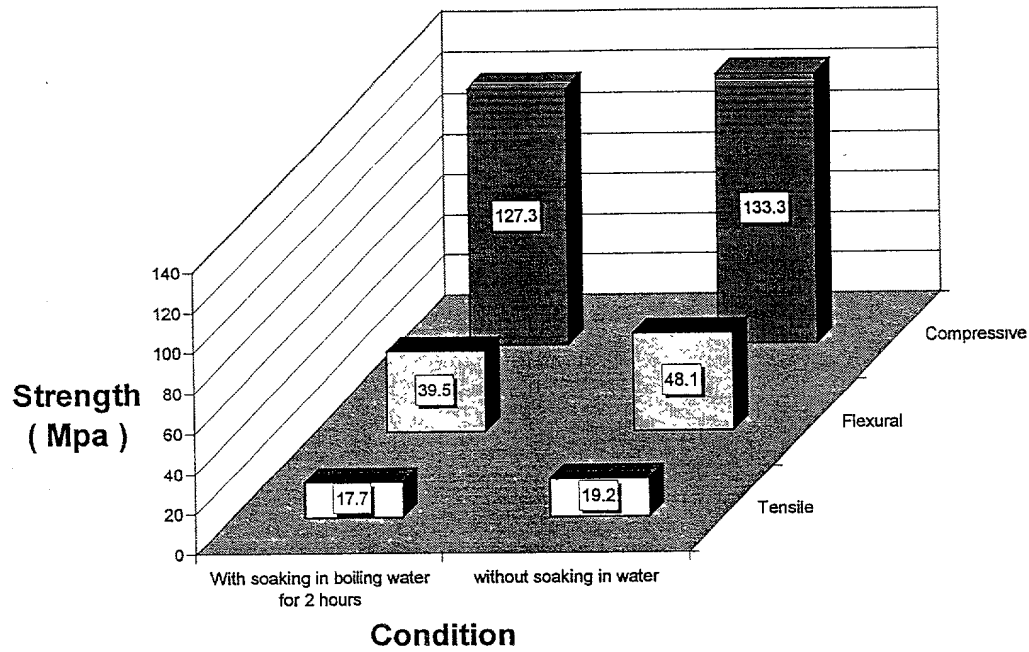


FIG. 31

Density of Soy-based PU polymer concrete and conventional concrete

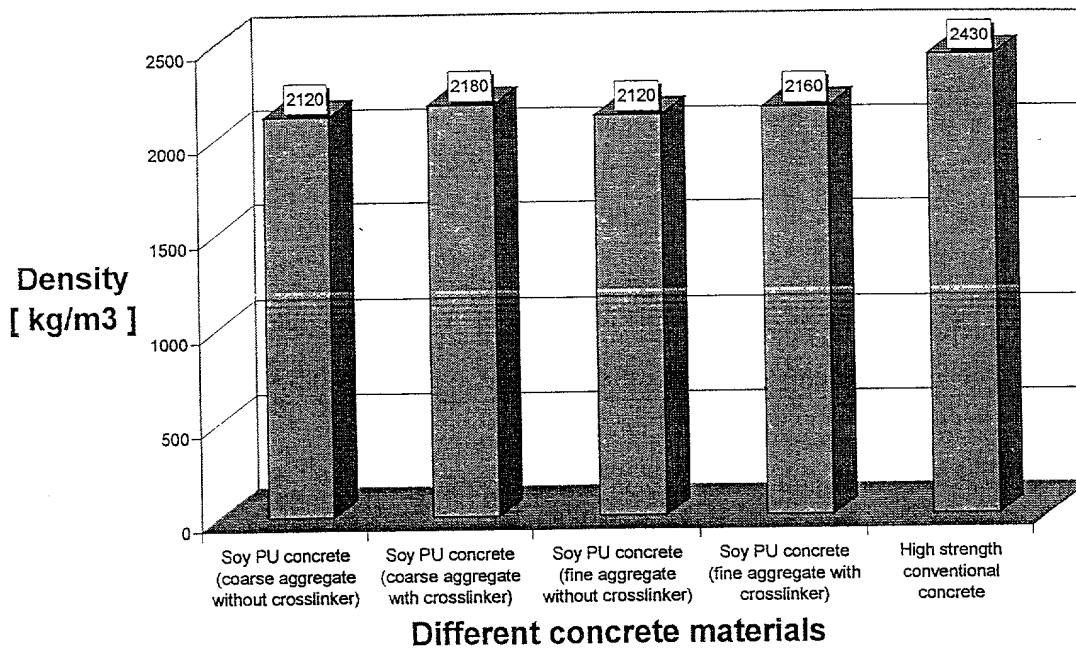


FIG. 32

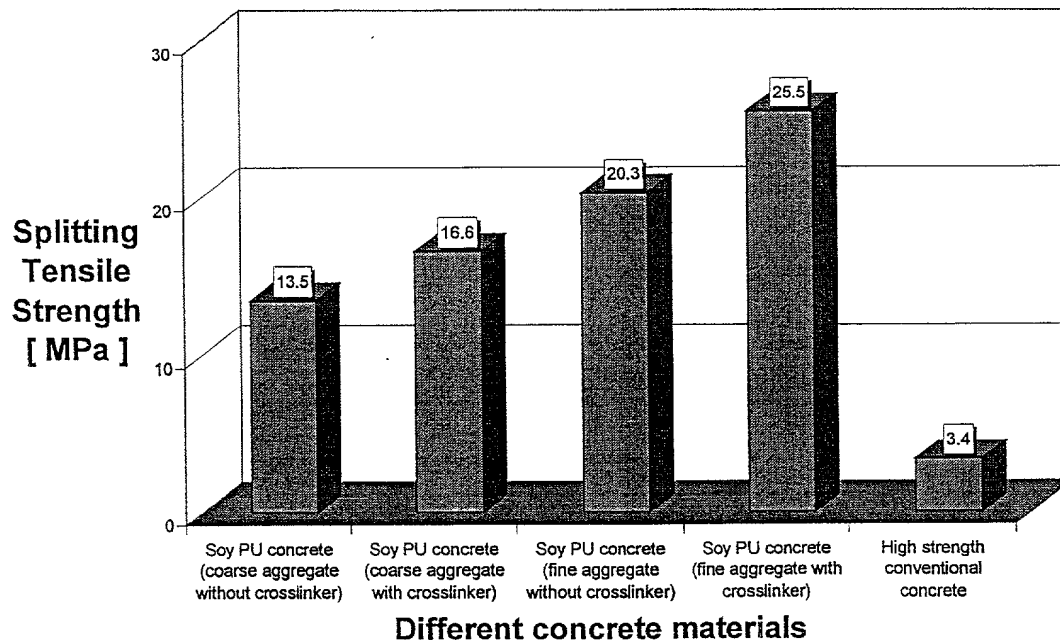
[illegible]

FIG. 33

Flexural strength of Soy-based PU polymer concrete and conventional concrete

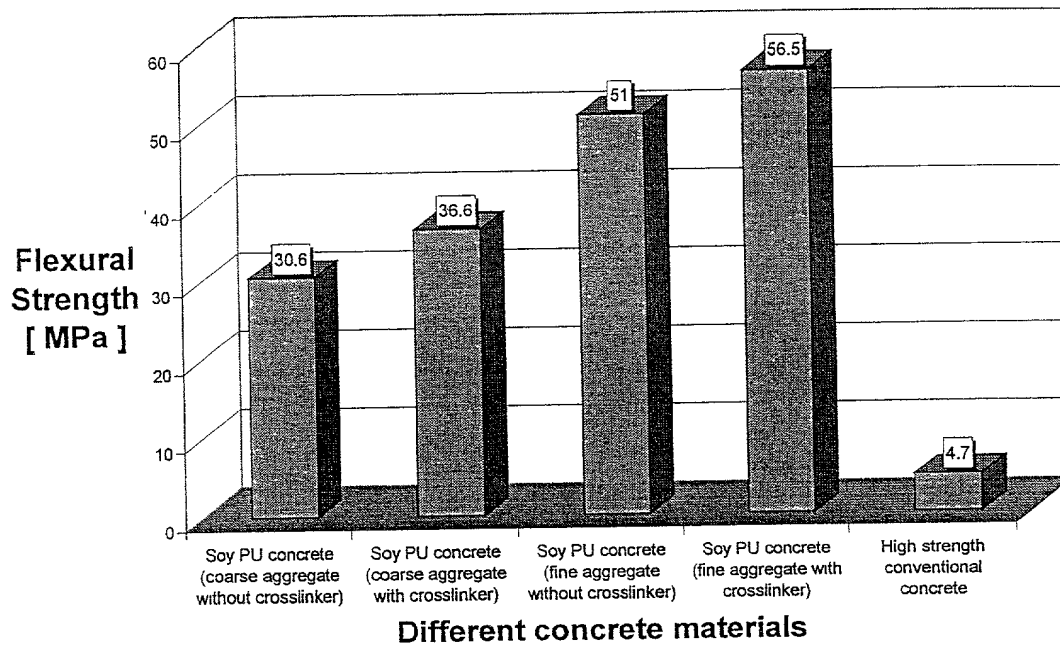


FIG. 34

Compressive strength of Soy-based PU polymer concrete and conventional concrete

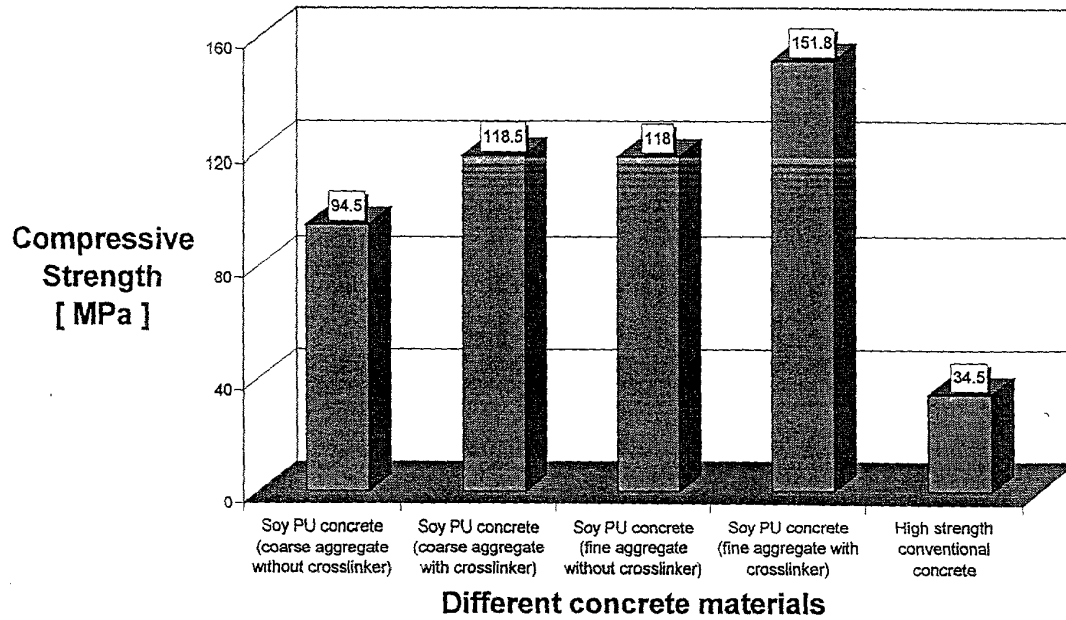


FIG. 35

Abrasion resistance of Soy-based PU polymer concrete and conventional concrete

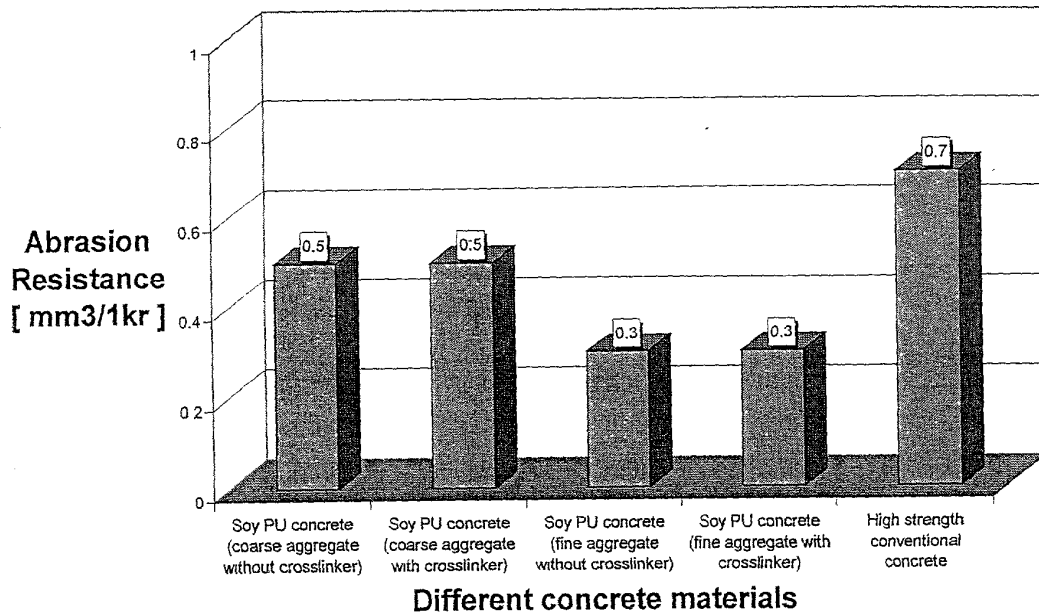


FIG. 36